

DaimlerChrysler AG

Patent Claims

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1. An air conditioning installation for a passenger cell (10) of a vehicle, said passenger cell having a rear area (15), with at least one air duct (18) which leads to the rear area (15) and which can be acted upon by air of preselectable temperature, and with at least one air outflow device (20) which is connected to the air duct (18) and which is arranged in the rear area (15), characterized in that the air duct (18) has emanating from it a duct branch (19) which is closed off by means of a second air outflow device (21) arranged in the rear area (15), in that at the branch point is arranged an air distribution member (22) for allocating the air volume flowing in the air duct (18) to the two air outflow devices (20, 21), and in that the air distribution member (22) is designed in such a way that the allocation of the air volume stream takes place as a function of the "cooling" and "heating" operating modes of the air conditioning installation.

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2. The air conditioning installation as claimed in claim 1, characterized in that one air outflow device (20) is arranged in the foot space and the other air outflow device (21) is arranged in the midplane of the rear area (15), and in that the allocation of the air volume stream as a function of the operating mode is such that, in cooling operation, the air volume part stream arriving at the air outflow device (20) placed in the foot space is throttled.

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3. The air conditioning installation as claimed in claim 2, characterized in that the allocation of the air volume stream as a function of the operating mode

is additionally such that, in heating operation, the air volume part stream arriving at the air outflow device (21) placed in the midplane is throttled.

5 4. The air conditioning installation as claimed in
claim 2 or 3, characterized in that the amount of
throttling of the respective air volume part stream is
carried out as a function of the temperature difference
between an actual temperature and a preselected desired
10 temperature.

15 5. The air conditioning installation as claimed in
one of claims 2 - 4, characterized in that the amount
of throttling of the respective air volume part stream
is carried out as a function of a ventilation
temperature.

20 6. The air conditioning installation as claimed in
claim 5, characterized in that the ventilation
temperature is picked up in the air conditioning
installation directly from the air flowing in the air
duct (18) or indirectly in a temperature range
equivalent to this.

25 7. The air conditioning installation as claimed in
one of claims 1 - 6, characterized in that the air
distribution member (22) has an air flap (23), which is
pivotable into two end positions in each case shutting
off one of the air outflow devices (20, 21), and a
30 pivoting drive (24) which drives the air flap (23) and
which can be controlled via a temperature-influenced
actuation signal (27).

35 8. The air conditioning installation as claimed in
claim 7, characterized in that the actuation signal for
the pivoting drive (24) is formed by the output signal
from a desired/actual-value comparator (25) which
compares a desired temperature set in a temperature

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preselection element (27) with the actual temperature measured in the rear area (15).

9. The air conditioning installation as claimed in
5 claim 7 or 8, characterized in that the actuation signal for the pivoting drive is a function of the ventilation temperature.

10. The air conditioning installation as claimed in
one of claims 1 - 9, characterized in that the branch point of the duct branch (19) lies near the rear area end of the air duct (18).